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Los Alamos
National Laboratory

Risk Reduction and Environmental Stewardship Division

METEOROLOGY & AIR QUALITY

Quality Management Plan

for the

Meteorology and Air Quality Group (MAQ)

Prepared by: Terry Morgan Terry Morgan, QA Officer	Date: 2/28/03
Reviewed by: Scott Miller, Deputy Group Leader	Date: 2/28/03
Approved by: Jean M Dewart Jean Dewart, MAQ Group Leader	Date: 2/28/03

2/27/03

General Information

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Appendixes

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History of revision

Revision	Date	Description of Changes
0	11/30/95	New document.
1	10/10/96	Revision into new format and extensive additions to reflect new organizational structure.
2	12/22/98	Revised chapters *Performance Appraisals*, *Planning and Performance of Work*, *Analytical Chemistry*, *Data and Software Management*. Revised organization chart. Added new chapter *Off-Normal Events*.
3	02/11/99	Added chapter *Waste Management* to implement new ESH Division requirements.
4	12/12/00	Revised definition of deficiency, included effluent in *Environmental Sampling* and *Control of Samples* chapters, added words on use of qualified persons or organizations in equipment calibration and maintenance chapters, added new chapter *Management Walk-arounds*, and added new chapter *Student Program*.
5	8/23/01	Added chapter for chemical hazard control plan, added block on compliance with DOE O414.1A, added words to chapter *Project Plans* about compliance with DOE O414.1A, and referred to Stop Work policy in Section 5.
6	3/18/02	Added chapters *Public Involvement*, *Public Dose ALARA*, and *Airshed Management*.
7	2/28/03	Added chapter on ESR preparation, added words in *Environmental Permitting* and *Management Walk-arounds*, changed references to former division, and changed references in numerous places.

Section 1

Quality Program

Organization

Introduction

This plan specifies how the Meteorology and Air Quality Group (MAQ) performs air quality activities for Los Alamos National Laboratory (LANL or the Laboratory).

Group mission

The Meteorology and Air Quality Group (MAQ) provides regulatory and environmental surveillance leadership and services to meet Los Alamos National Laboratory (LANL) air quality obligations and public assurance needs by:

- Developing and implementing programs to ensure institutional compliance with State and Federal Laws related to air quality regulations.
- Developing and implementing programs to ensure institutional compliance with applicable (according to the UC/DOE contract) DOE Orders for air quality surveillance and dose assessment activities.
- Developing and implementing programs, according to ISM principles, that ensure line management is provided with sufficient information to make informed decisions regarding air quality issues.
- Developing and implementing programs to address community concerns related to air quality issues.

Regulatory drivers

The drivers for the development and implementation of programs in MAQ are the applicable parts of:

- 40 CFR Part 50 through 93 Air Programs
- New Mexico Air Quality Control Regulations 20 NMAC Chapter 2
- DOE Order 450.1, Environmental Protection Program
- DOE Order 5400.5, Radiation Protection of the Public and the Environment
- DOE Order 151.1, Comprehensive Emergency Management System (meteorological activities for emergency management)
- DOE Order 414.1A, Quality Assurance
- DOE Order 231.1, Environment, Safety, and Health Reporting

Organization, continued

Other drivers

Other drivers for MAQ include

- Responding to requests for technical assistance in meeting surrounding community needs for air quality monitoring and information
- Providing tools to line management for implementation of ISM principles.

DOE Order 414.1A

Compliance with DOE Order 414.1A is required by the DOE and LANL for all organizations. This plan is structured to address the 10 criteria of the order and each section explains the group's requirements for compliance with the corresponding criterion.

Organization

The group leader and deputy group leader have line management responsibility and authority for personnel and budget in MAQ. Reporting to the Group leader, the project and team leaders are delegated authority for budget allocation and for performance assessment input for performance appraisals for MAQ staff assigned to them. The team and project leaders also have the first line supervisory authority to ensure that MAQ projects are completed according to quality specifications and budget obligations. The group leader appoints team leaders and project leaders.

The current group organization chart is presented as Appendix A (MAQ Organization Chart).

Note on project and team leader terminology

LANL has proposed a change to the job descriptions of team leaders and project leaders. Under the proposed descriptions, "project leaders" as used in MAQ would be considered "team leaders." Until the change is effective, the terms are used interchangeably within MAQ.

Implementation

The following table lists specific responsibilities.

Who	What
Group leader and deputy group leader *(continued on next page)*	Define overall MAQ goals and objectives aligned with RRES-DO and Laboratory goals and objectives. Ensure that work meets quality specifications and budget obligations. • Define teams and projects within the group. • Ensure RRES-DO has current MAQ Org Chart. • Appoint team and project leaders. • Allocate budget to team leaders.

Continued on next page.

Organization, continued

Who	What
Group leader and deputy group leader, *continued*	• Ensure trained and qualified workforce is available to accomplish work on projects. • Communicate work expectations to team and project leaders and group members. • Communicate with team and project leaders and group members to determine status of issues related to projects. • Track overall group budget. • Provide first line supervision of project leaders. • Develop approach and specifications for quality assurance across projects and provide support to project leaders in implementation. • Ensure projects have sufficient budget and are properly staffed. • On an annual basis, prepare written project descriptions, clearly outlining technical scope, personnel, budget, and schedule – with the appropriate product and cost milestones. • Track project budget, schedule, and progress.
Project and team leaders *(continued on next page)*	Manage the tasks and staffing of the project in order to deliver the project product(s). Provide first line supervision of personnel assigned to the project. Plan, assign and manage tasks in order to • Ensure personnel are properly trained for the task. • Ensure personnel follow prescribed work procedures and safety guidance. • Ensure tasks are completed on schedule, on budget, and meet quality specifications. Communicate with staff and provide guidance, peer review, and technical problem resolution. Evaluate the productivity and suitability of staff and recommend changes, as needed, to increase the productivity and skill level of staff. Provide input to performance appraisals and salary increases.

Continued on next page.

Organization, continued

Who	What
Project and team leaders, *continued*	Communicate with team leader or group leader on issues that could result in failure to meet project goals or institutional requirements. Document any resulting significant decisions that affect project policy or processes and communicate decisions to project members. Revise appropriate procedures or plans, if necessary.
Project and team members	Accomplish the assigned work in a manner that meets quality specifications and meets specified milestone timetables. • Communicate with project or team leader on progress of work assignments. • Account for the delivery of all work assignments. • Bring technical problems with work assignments to the attention of the project leader.

MAQ Quality Management System and ISM Integration

MAQ Policy

MAQ products will meet quality specifications provided by this group Quality Management Plan (QMP), project-specific quality assurance project plans (QAPPs), and implementing procedures. The principles and requirements of ISM (LAUR-98-2837, Rev. 4, "Integrated Safety Management Description Document") will be integrated in all aspects of the MAQ Quality Management System. This integrated quality management system will ensure work, health, safety, and environmental specifications are met.

Document hierarchy

MAQ follows a system of documented plans and procedures. The MAQ quality management system consists of the

- group-level quality management plan (this document)
- quality assurance project plans
- implementing procedures

ISM expectations will be integrated into all documents in this hierarchy to assure that all work follows the principles of ISM.

Revising and distributing this plan

The group leader and a chosen reviewer will approve all revisions to this plan.

This plan will be distributed under the group document control program (see Section 4 *Document Control*, page 25).

Project plans

MAQ will develop and maintain documented plans for all projects. MAQ will follow either EPA or DOE guidance to develop project plans, depending on the nature of the project work. Regardless of the format selected, MAQ project plans will fulfill DOE O414.1A requirements.

See Section 4 *Project Plans*, page 20, for information on how to develop plans. The project plans existing to date are:

- Rad-NESHAP Compliance Project (MAQ-RN)
- Sampling and Analysis Plan for the Radiological Air Sampling Network (MAQ-AIRNET)
- Meteorological Monitoring (MAQ-MET)
- Direct Penetrating Radiation Monitoring (MAQ-DPRNET)
- Neighborhood Environmental Watch Network (MAQ-NEWNET)
- Asbestos Reporting Project (MAQ-ASBESTOS)
- Operating Permit Project (MAQ-OP)
- Beryllium Stack Monitoring at TA-3-141 (MAQ-BM)
- Regulatory Review and Permitting Project (MAQ-RRP, in preparation)

MAQ Quality Management System and ISM Integration, continued

Procedures

Every MAQ process of sufficient complexity, that is done repeatedly, will be described in an implementing procedure. Procedures are developed, reviewed, and approved in accordance with MAQ-022, "Preparation, Review, and Approval of Procedures." Procedures are reviewed and updated as required on an annual basis. Requirements of Hazard Control Plans (HCPs) will be incorporated into all procedures assuring all work in the group is authorized as required by ISM.

Working with other groups

MAQ routinely works in partnership with facility managers, subcontractors, and other Laboratory groups and divisions to achieve our mission. The group will identify responsibilities and quality assurance requirements for these partners in our project plans or in other Laboratory documents such as Laboratory Implementation Requirements (LIRs) or Memoranda of Understanding. The group will pass through requirements using a graded approach to scale the level of requirements to the importance or the critical nature of the work or data provided. Such requirements could include recordkeeping, certification of data integrity, or a complete quality program.

Implementation

The following table lists responsibilities.

Who	What
Group leader	Approve this plan and all revisions to this plan; choose a reviewer to review all revisions to the plan. Appoint members to the MAQ Safety Committee. Conduct monthly Management Walk-arounds.
Project and team leaders	Develop quality project plan, following appropriate guidance or standards, to prescribe requirements for the project. Ensure quality requirements imposed on other groups or organizations are documented in quality plans or appropriate LIRs.

Continued on next page.

MAQ Quality Management System and ISM Integration, continued

Who	What
MAQ Safety Committee	Review all HCPs in the group to assure integration of ISM into all work. Record official minutes of meetings. Develop, measure, track, and communicate MAQ performance metrics related to ES&H. Participate in a walkaround at least four times per year. Investigate and track MAQ ES&H incidents and communicate findings to group and upward.
Procedure preparers	Describe in implementing procedures any essential internal and external interfaces with other organizations and their quality programs.

Section 2

Personnel Development

Personnel Recruitment

MAQ Policy All group personnel will be qualified through a combination of education, experience, and training to perform their assigned tasks. The group will recruit a diverse workforce adhering to the Laboratory personnel system (Human Resources Division) policies and procedures for hiring.

Implementation The following table lists responsibilities.

Who	What
Group leader, project leaders, or team leaders	Establish and document job descriptions for each position, including education and skills, knowledge, and abilities required. Review applications and select qualified candidates.
Group leader	Make final selection of applicants for the job(s).
Laboratory personnel organization	Supply a pool of qualified applicants to the group. Hire employees based on the recommendations of project leaders or managers.

Personnel Training and Professional Development

MAQ Policy

New group employees will receive orientation and training to meet their respective job duties, responsibilities, and authorities. This orientation will include the principles and expectations of integrating safety into the work of MAQ. When changes to job assignments are made, re-orientation and training will be conducted as necessary for each employee. Personnel will continue to receive the necessary training to achieve proficiency with job assignments and to ensure that worker health and safety is maintained. Professional development opportunities will be encouraged beyond basic qualification training. Records will be maintained by the group to document job-specific training.

Professional development

MAQ requires specific skills to accomplish its missions. Those skills include:

- Health Physics
- Chemical Engineering
- Mechanical Engineering
- Meteorology
- Analytical Chemistry
- Environmental Law
- Environmental Science
- Quality Assurance
- Industrial Hygiene
- Computer Science

Professional development in these areas will be encouraged and supported by group management.

Implementation

The following table lists responsibilities.

Who	What
Group leader	Ensure that new employees receive orientation to their respective responsibilities, authorities, and requirements documents governing the work they perform, according to procedure MAQ-032. Ensure employees have a coordinated training plan according to procedure MAQ-024. Make decisions regarding allocation of training and professional development resources.
Group Program Administrator	Maintain the system to track training plans and records according to procedure MAQ-024.

Continued on next page.

Personnel Training and Professional Development, continued

Who	What
Project and team leaders	Ensure that new project employees receive orientation to their respective job duties, authorities, and requirements documents governing the work they perform, according to procedure MAQ-032; and ensure all project team members receive coaching and/or mentoring for their respective job duties. Ensure that reorientation is conducted, as necessary, to adapt to changes in an employee's assigned work and in requirements governing the work performed. Determine project specific training needs of project team members. Ensure that all project team members receive and document the training required (according to procedure MAQ-024). Review project team members' training plans annually.
Team members	Share responsibility with project leader and group leader for identifying and obtaining necessary training. Identify opportunities for professional development. Coach and mentor other employees whenever possible and appropriate.

Performance Appraisals and Feedback

MAQ Policy Performance appraisals will be conducted annually by group management in accordance with Laboratory and RRES Division requirements. In addition to this formal appraisal process, feedback throughout the year is encouraged. This feedback will go beyond individual performance and may address issues such as management performance, personnel development, job satisfaction, etc.

Implementation The following table lists responsibilities.

Who	What
Group leader	Initiate performance appraisal process. Appoint lead supervisors (the group leader, program administrator, project leader, or team leader) for drafting performance appraisals for individuals in the group. Every individual will have a lead supervisor for developing the final performance appraisal. Obtain and file all draft performance assessment preparation material in confidential file. Schedule performance assessment deadlines and deliverables. Manage overall process in the group. Review and sign all performance assessments. Provide routine feedback to project leaders, team leaders and group members throughout the year. This will include both positive feedback and constructive criticism.

Continued on next page.

Performance Appraisals and Feedback, continued

Who	What
Project and team leaders	Meet with other supervisors, project leaders and/or team leaders to discuss appraisal process, individual's accomplishments, discussion items, etc., and prepare a supervisor's worksheet. Obtain Employee Performance and Development Plan from employee that includes all accomplishments over all projects. Draft performance appraisal. Obtain /resolve comments from other supervisors of individual. Submit performance appraisal to group office for review. Coordinate and perform oral performance appraisal. Provide routine feedback to supervised group members, at a minimum. This will include both positive feedback and constructive criticism.
All employees	Submit employee input to lead supervisor describing all accomplishments during the performance year. Provide routine feedback to immediate supervisor on issues of job satisfaction, personal development, and any other issues of concern. This will include both positive feedback and constructive criticism. Request feedback from immediate supervisor whenever clarification of expectations is needed or desired.

Student Program

MAQ Policy

Undergraduate (UGS) and Graduate (GRA) students will be actively recruited to obtain the best technical assistance for long term commitment (1 to 3 years) with the goal of positive student growth. Recruitment and placement will follow all LANL procedures and policies regarding student hiring. Relatives of MAQ personnel will not be considered for any student position within MAQ. All students will have a mentor/supervisor that will assume responsibility for assurance of training.

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Approve student hires.
Project and team leaders	Recruit and propose student hires. Document job assignments. Act as mentor/supervisor and assure laboratory-required training is completed. Assume safety line manager responsibilities.

Section 3

Quality Improvement

Continuous Improvement

MAQ Policy The group subscribes to the principles of problem prevention and continuous improvement. All personnel are encouraged to identify and suggest improvements to all group processes and activities.

Implementation The following table lists responsibilities.

Who	What
Group Leader	Ensure that an atmosphere exists that allows employees to suggest improvements and opportunities for prevention of problems. Take appropriate action on suggestions made by employees. Appropriate action may be implement, pass on to appropriate management, or explain why it cannot be implemented. Track any safety issues through the management walk-around system.
Project and team leaders	Identify individuals who have shown positive continuous improvement behavior for application of the LANL award program. Identify customers and obtain their suggestions for improvements on a routine basis.
All employees	Identify opportunities for process improvements, process simplification, health and safety enhancement, environmental protection, or other improvements of the group's operations. Discuss such opportunities with a project leader, team leader, or the group leader.

Deficiencies and Corrective Action

MAQ Policy

Group personnel will take action when a deficiency (failure to meet external or internal requirements in laws, regulations, or requirements documents, including safety issues or accidents) is found. This action may include immediate correction of the deficiency. All deficiencies must be reported according to project requirements, verbally or in writing, to either the project leader or to the group leader. Project leaders, team leaders, and group management will take timely action to correct deficiencies. Project or team leaders or the Group Leader will document deficiencies and their correction. These data will be used to identify systemic weaknesses in quality management.

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Foster an atmosphere in which deficiencies are reported and corrected. Ensure deficiencies are documented. Periodically review deficiencies for trends or systematic problems and implement any appropriate management corrections.
QA Officer	Maintain the implementing procedure (MAQ-026) to describe the process for documenting deficiencies and their resolution by responsible individuals.
Project and team leaders	Ensure that level of deficiency documentation and corrective actions is appropriate by considering how a deficiency: • affects completeness, cost, or quality of work • affects project goals, deliverables, or schedules • represents unacceptable equipment or supplies • represents an opportunity for quality improvement. Report relatively serious deficiencies at a project leader meeting.

Continued on next page.

Deficiencies and Corrective Action, continued

Who	What
All employees	Identify any deficiencies and report them to the project leader or group leader. Describe how work or products were affected. Document the deficiency appropriately (see MAQ-026).
Responsible project and team leaders or Group Leader	Assign knowledgeable individuals to prepare and implement a correction for the deficiency, and ensure that it is adequately evaluated and corrected (see MAQ-026).

Section 4

Documents and Records

Project Plans

MAQ Policy

Quality assurance project plans will be developed for all MAQ projects. The MAQ QMP will serve as the upper-level document to all project plans. Project plans will specify the roles, responsibilities, and goals of a project and will use a format or standard that is appropriate for the project (e.g., EPA QA/R-5, DOE Order 414.1A, EPA 40 CFR Part 61, etc.). Any project plan that requires environmental data collection will use the EPA data quality objectives (DQO) process to develop data quality requirements. All project plans will comply with the content requirements of LPR380-00-00 ("Quality") and DOE O 414.1A ("Quality Assurance"). Many requirements are addressed at the group level through this QMP and do not need to be repeated. Project plans will use the graded approach in addressing all requirements.

When preparing a quality plan (or management plan, strategic plan, etc.) for any program that spans beyond MAQ control, it will likely require deviations from the format and content. In such instances, documentation of these deviations and the reasons should be provided to the group leader prior to implementation of the plan.

Implementation

The following table lists responsibilities.

Who	What
QA Officer	Review and approve all new and revised project plans.
Group Leader	Review and approve all new and revised project plans.

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Project Plans, continued

Who	What
Project and team leaders	Prepare a project plan for the project to describe the critical or essential elements of the project. Use standards appropriate for the project and its customers (e.g., use EPA QA/R-5 for EPA compliance programs, DOE O 414.1A for laboratory customers, etc.). A sampling and analysis plan may be written as a supplement to the project plan to describe a sampling system that is common to two or more projects. If environmental or effluent data collection is required for a project, follow the DQO process (see EPA QA/G-4) unless specific requirements are identified in the applicable regulation or order. Include the project leader, a QA team member as a facilitator, a peer reviewer from another discipline in the group, and stakeholders if possible (DOE, decision makers who will rely on data, etc.). Document the data requirements in the plan. Annually review the project plan and make appropriate revisions. If necessary, document any deviations from accepted format and content and provide this documentation to the group leader for approval prior to finalizing any plan.

Procedures

MAQ Policy When a process must be performed in a consistent manner, or when failure to perform a process in a certain manner could result in significant negative impact to a project's quality specifications, a procedure will be written to govern or control that process.

Implementation The following table lists responsibilities.

Who	What
QA Officer	Maintain the implementing procedure (MAQ-022) that describes the process for preparing, reviewing, and approving procedures within the group. Ensure the process owners annually review all procedures, facilitate any needed revisions, and document the annual reviews.
Group Leader	Approve all procedures.
Project and team leaders	Determine which procedures are to be developed for the project and assign preparers. Approve all procedures applicable to their project.
Procedure preparers	Prepare all procedures according to MAQ-022 and accurately prescribe the work processes. Ensure that procedures comply with Laboratory requirements to evaluate the safe operating conditions for an operation, when required, and include environment, safety, and health considerations of the operation. Obtain review by appropriate HSR division safety groups if the procedure contains safety-related steps or other safety hazards that require review (see LIR 300-00-01 and LIR 300-00-02). Ensure that procedures list any wastes generated and describe the steps to properly and legally dispose of the waste. In the procedure, list the training required before an employee may perform the procedure. In the procedure, list the documents that are to be maintained as records and submitted to the records management system as a result of the process described in the procedure.

Laboratory Implementing Requirement (LIR)

MAQ Policy

Laboratory Implementing Requirements (LIRs) will be developed when needed (and as approved by the Laboratory) to provide requirements to other Laboratory organizations for submitting required air quality data to MAQ, keeping appropriate records, or taking other actions required to ensure Laboratory's compliance with air quality requirements.

MAQ is responsible for LIR 404-10-01.2 "Air Quality Reviews". This LIR presents the requirements for air quality and environmental ALARA review of new/modified projects prior to their start.

Implementation

The following table lists responsibilities.

Who	What
Project and team leaders	Determine, in coordination with the group leader, whether the project requires development of one or more LIRs to pass on requirements to Laboratory organizations. Follow the appropriate LIR that provides the requirements necessary to draft, review, and issue the LIR. Assign personnel to prepare LIRs as needed.
Preparers	Prepare LIRs in accordance with Laboratory requirements. Forward LIRs to appropriate organizations for approval and distribution.

Records

MAQ Policy Records will be maintained and protected to document critical processes and compliance with requirements.

Implementation The following table lists responsibilities.

Who	What
Records coordinator	Maintain the implementing procedure (MAQ-025 or others) that describes the group-wide records management system, incorporating the applicable guidance in the Laboratory Quality Assurance Guidebook, applicable DOE Orders, and applicable Laboratory guidance. Include in the procedures any requirements for records disposition, storage, and retrievability. Maintain all records resulting from group operations.
Group Leader, project and team leaders	Ensure that appropriate records that document compliance with critical processes and requirements are preserved.
All employees	Determine the records that are critical or essential to prove compliance with a requirement. Submit such records to the records management system. Other records may be submitted at the employee's discretion.
Procedure preparers	When writing procedures, list the documents to be maintained as records and submitted to the records management system as a result of the process described in the procedure. See Section 4 (*Procedures,* page 22) for more information.

Document Control

MAQ Policy Controlled documents will be distributed and made available to personnel performing the work described in the documents. A control and distribution system will be established to track documents that describe or control work.

Implementation The following table lists responsibilities.

Who	What
Office Administrator	Ensure the implementing procedure (MAQ-030) describes the process for controlling group procedures or other documents and implements the requirements established by the Communications and Records Management Division (or its successor). Prepare controlled documents for posting on the group's web page for controlled documents.
Group Leader, project and team leaders	Periodically review controlled procedure distribution lists to ensure that all employees will have available in or near their work areas any controlled procedure that governs work in the work area. Determine which instructions, specifications, and drawings must be controlled along with all plans and procedures.
Employees	Before performing work, determine whether an applicable procedure exists and ensure that required training has been documented.

Section 5

Work Processes

Work Planning and Hazard Review

MAQ Policy

Work that contributes to achieving the mission of MAQ will be planned, documented, and tracked. Work planning will be consistent with the principles of Integrated Safety Management (ISM), Integrated Safeguards and Security Management (ISSM), and in compliance with LIR 300-00-01. All personnel will understand and operate within the parameters of Facility Safety Plans, Facility-Tenant Agreements, and associated requirements. Procedures will be reviewed for hazards by the MAQ Safety Committee, Project Leader, and Group Leader. Project leaders will provide first line supervision of personnel assigned to project tasks and ensure work is performed in a safe manner and achieves project quality specifications.

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Maintain a set of group-wide objectives and track progress toward those objectives. Foster an atmosphere in which safety and security awareness is practiced. Appoint members to the MAQ Safety Committee. Conduct management walk-arounds on a monthly basis. Authorize all work in MAQ. Communicate applicable Facility Tenant Agreement requirements to group members.

Continued on next page.

Work Planning and Hazard Review, continued

Who	What
Project and team leaders	Develop a project plan according to the requirements for project plans (see Section 4 *Project Plans*, page 20). Maintain a set of project objectives and track progress toward those objectives. Ensure that implementing procedures (see Section 4 *Procedures*, page 22) are developed for critical or essential processes. Assist the MAQ Safety Committee in the implementation of Safe Work Practices during review of procedures. Ensure safety review is conducted (MAQ-035) for all assigned work not covered in an MAQ procedure. Provide first line supervision of personnel assigned to project work tasks and ensure work meets quality specifications of the project. Assure all work conducted on the project is authorized. Understand and operate in accordance with applicable Facility Safety Plans and associated requirements.
MAQ Safety Committee	Coordinate the identification of hazards, development of controls, and assure documentation of hazards and mitigation for all work in MAQ. • Annually review all procedures with relevant supervisors and workers as required by MAQ-035 and safe work practices. • Make recommendations for hazard mitigation. • Ensure non-routine work procedure (MAQ-035) is implemented group-wide. • Make recommendations on level of work authorization.

Continued on next page.

Work Planning and Hazard Review, continued

Who	What
Employees	Assist the MAQ Safety Committee in the implementation of Safe Work Practices. Make suggestions on how to improve safety in the workplace. Before initiating work, • become familiar with project plan requirements. • determine whether an applicable procedure exists. • determine required training for performing the task. • ensure that training has been completed. • use only controlled copies of procedures for performance of the work. • use non-routine work procedure (MAQ-035) for work not described in procedures. • perform work according to any applicable procedures. Do not perform any work that is not authorized. Authorized work is work for which you have completed training plans. Follow the Lab's Stop Work policy (see LIR 401-10-01) whenever conditions of imminent danger or other serious hazards are noticed.

Waste Management

MAQ Policy MAQ will comply with Division and laboratory requirements for waste management and minimization, as specified in LIR404-00-01 ("Waste Acceptance, Characterization, and Certification Program"), LIR404-00-05 ("Managing Radioactive Waste"), and LIR404-00-02 ("General Waste Management Requirements"). Specific hazards, controls, and waste characterization processes applicable to a process will be evaluated and documented through the Hazard Control Plans (see MAQ-035) and communicated in the appropriate procedure. Supervisors will identify those employees who are considered waste generators and will ensure those employees receive required training.

Implementation The following table lists responsibilities.

Who	What
Group Leader	Ensure full compliance with all Laboratory, state, and federal requirements for waste management.
Project and team leaders	Ensure waste issues are properly identified and documented in Hazard Control Plans and appropriate procedures according to MAQ-035. Identify employees who generate waste and ensure those employees receive required training as waste generators. Ensure each supervised employee: • understands and complies with waste management requirements as specified in the appropriate group procedures and Hazard Control Plans. • understands and complies with appropriate procedures and hazard control plans as required. • has been properly trained and follows all applicable regulations and procedures.

Continued on next page.

Waste Management, continued

Who	What
Waste generators	Prevent the unnecessary generation of waste. Minimize the generation of waste to extent possible. Properly identify and document waste streams. Segregate low-level, mixed, hazardous, and nonhazardous waste streams. Ensure that waste is packaged, marked, labeled, and stored properly. Comply with the requirements in applicable facility-specific procedures for waste operations within RCA(s).

Chemical Hazard Communication

MAQ Policy

This chapter constitutes the "Hazard Communication Plan" required by LIR402-510-01 for compliance with OSHA hazard communication requirements. MAQ operations fall under HAZCOM, rather than Chemical Hygiene Plan requirements, because the majority of operations are associated with creating products and conducting routine operations.

Supervisors will determine who is a chemical worker and ensure every chemical worker completes the course Hazard Communication Introduction. Supervisors will ensure material safety data sheets are available at work sites where chemicals are used. Hazards are communicated to workers via MAQ procedures or Hazard Control Plans and all workers are required to follow a procedure or HCP for any work. Chemical workers will comply with requirements for storage, labeling, use, and transportation of chemicals.

Implementation

The following table lists responsibilities.

Who	What
Project and team leaders	Determine which employees are chemical workers and ensure chemical workers receive training to the course Hazard Communication Introduction.
Group chemical coordinator	Maintain a current list of chemicals for the group and update the information monthly. Ensure LANL chemical tracking database reflects current inventory of chemicals within group.

Continued on next page.

Chemical Hazard Communication, continued

Who	What
Chemical workers	Attend Hazard Communication Introduction training and any other training required by supervisor. Participate in medical evaluations, as needed (e.g., for carcinogen use). Know where the group's current list of chemicals is located or obtainable. Have a MSDS for each chemical readily available to workers and know where the MSDS are located. Read and understand the MSDS, include the risks in HCPs, and identify measures needed to mitigate the risks. Keep the original container labels in good condition or replace them, as needed. Label secondary containers (name of owner, health and physical hazard warnings, and for carcinogens add "Danger" and "Carcinogen Hazard" labels). Change labels if new hazards are identified (e.g., a chemical is designated as a carcinogen). Properly store chemicals: do not store incompatible chemicals in the same storage units (for more specific info, see Attachments 5, 6, and 7 of Chemical Management LIR402-510-01.0). Manually add any new chemical ordered to the building's chemical list. Label compressed and liquefied hazardous gas cylinders must be labeled with contents, and hazard warning. When a gas is classified in more than one category, the most stringent labeling requirements shall be used. Gases supplied by LANL's Gas Plant should already have the proper labels applied. Properly use engineering controls and personal protective equipment (PPE) needed to mitigate hazards (should be identified in HCPs). Follow transportation requirements in LIR405-10-01 when transporting chemicals. Report immediately to line managers and FMs (or EM&R at 911 or 7-6211 if line manager/FM designee cannot be found) all accidents, spill, and leaks that could result in occupational exposure, illness, injury, or environmental release.

Review of New Regulations

MAQ Policy

Periodic applicability determinations will be conducted for newly proposed and finalized regulations promulgated by Federal and New Mexico State Air Quality Statutes and by DOE Order. Periodic review of new Laboratory operations will determine applicability status of Federal and New Mexico State Air Quality regulations. All applicability determinations will be documented and peer reviewed to determine need for Laboratory Performance Requirements (LPRs) and Laboratory Implementing Requirements (LIRs).

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Assign employees to review regulatory registers and regulations and obtain updates from the regulators in order to determine LANL applicability. Ensure subscription and distribution of environmental newsletters relevant to Clean Air Act and compliance. Assign employees to develop, distribute, peer review, document and develop appropriate LPRs and LIRs from interpretations of Federal and State air quality regulations. Assign compliance assurance program for specific regulations to existing project leaders or create new project to develop compliance program. Ensure timely notification of LANL operations and facility personnel of applicable requirements.
Regulatory Review and Permitting Team	Review regulatory registers and regulations in order to determine LANL applicability. Obtain legal council review as appropriate. Review LANL operational changes (ESH-ID's, NEPA documents, or open requests) to determine applicability of Federal and State air quality regulatory requirements. Determine actions necessary to comply with requirements. Identify permitting or other compliance issues resulting from operational changes. Obtain peer review for compliance determinations. Notify operations and facility personnel of compliance requirements.

Airshed Management

MAQ Policy

The Meteorology and Air Quality Group develops programs to help ensure that airborne emissions from LANL operations are not only compliant with regulatory requirements but that responsible measures are pursued to minimize airborne emissions to protect our Northern New Mexico airshed. To that end, the Meteorology and Air Quality Group recognizes that decreasing air emissions may result in increased impacts on other media (e.g., water, soil, waste). When this possibility is identified, the group will pursue a course of action that will minimize the collective impacts on the environment.

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Seek opportunities to responsibly minimize air emissions and their associated impacts. Ensure that impacts to other media are considered.
Project and team leaders	Identify opportunities to minimize air emissions. Work with Group Leader to identify other affected media and identify path of least environmental impact. Provide input into the documentation of air emissions impacts. Support the implementation of mitigating measures.

Public Involvement

MAQ Policy

Public involvement is a process for identifying air quality stakeholders and obtaining their air quality concerns and ideas for MAQ programs. Stakeholders have included the New Mexico Environment Department DOE Oversight Bureau, Pueblos, environmental groups, and individual citizens. Public involvement is an essential part of assuring the protection of air quality.

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Promote the benefits of public involvement to MAQ group members and Laboratory customers
Project and team leaders	Identify stakeholders for their products. Identify reports, databases, websites, etc, that are of potential interest to stakeholders. Assist stakeholders in understanding MAQ calculations, assessments, and products. Request their input on these processes and products.

Public Dose ALARA

MAQ Policy

LANL operations and facilities that are sources of radiation exposure to the public (via the air pathway or direct penetrating radiation), will be evaluated with ALARA (As Low As Reasonably Achievable) criteria when the dose impact to a member of the public is 3 mrem or greater per year.

This policy does not apply to environmental restoration site remediation or to the release of property having residual radioactive material. These topics are addressed in DOE memo "Procedure for the Release of Residual Radioactive Material from Real Property" dated June 16, 2000.

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Develop public dose ALARA policy and publish it in LIR 404-10-01, "Air Quality Reviews." Obtain internal and external review of public dose ALARA policy.
New Source Review Project Leader	Assure that procedures are in place to identify new and/or modified sources of radioactive air emissions and direct penetrating radiation.
DPRNET Project Leader	Review new and/or modified sources of direct penetrating radiation to identify sources requiring a public dose ALARA evaluation. Work with LANL operating groups on ALARA evaluations.
Rad-NESHAP Project Leader	Review new and/or modified sources of air emissions to identify sources requiring a public dose ALARA evaluation. Work with LANL operating groups on ALARA evaluations.

Environmental Permitting

MAQ Policy

MAQ will help Laboratory operating entities apply for, negotiate, and comply with air quality permits required by State and Federal statutes. The group will provide laboratory operations with solutions allowing needed operational flexibility while minimizing costs for maintaining compliance. Emission limits will be proposed that reflect the needed operational flexibility and minimize the Laboratory's impact on the environment.

Implementation

The following table lists responsibilities.

Who	What
Regulatory Review and Permitting Team	Assist the Laboratory in the identification of sources at the Laboratory that require air quality permits. Ensure permit applications follow prescribed regulatory requirements for content and format. Ensure internal peer review of all draft permit applications before review by operating groups and facility managers. This review will focus on technical accuracy, operational flexibility issues, and long term cost effective permit maintenance, public health impacts, and other environmental concerns. Ensure facility and operating group review of permit application and incorporate relevant comments. Arrange classification, security, and OPSEC reviews. Arrange legal council review. Provide LANL with the point of contact between operating entities and the NMED.

Environmental Surveillance Report

MAQ Policy

MAQ will develop sections of the annual site environmental report (also known as the environmental surveillance report, ESR). MAQ is responsible for:

- Chapter 2: air quality and EPCRA compliance sections,
- Chapter 3: radiological dose assessment,
- Chapter 4: air surveillance, and
- Appropriate appendices.

Schedules and formatting will be developed in conjunction with RRES-ECO.

Implementation

The following table lists responsibilities.

Who	What
Project and team leaders	Identify sections of the report that they are responsible for. Assign authors to develop the sections. Ensure that sections of the report are prepared in accordance with DOE and LANL guidance and are peer reviewed prior to submittal to RRES-ECO. Ensure that appropriate records are identified and stored in the MAQ records center.

Environmental and Effluent Sampling

MAQ Policy Environmental and effluent sampling and data collection techniques will follow prescribed regulatory requirements, DOE Order guidance, or industry standards where possible. All sampling and data collection activities conducted by MAQ will be developed and planned by following the EPA DQO process or by addressing specific requirements within the applicable regulation or order.

Implementation The following table lists responsibilities.

Who	What
Project and team leaders	Develop DQOs for environmental and/or effluent sampling and data collection (see Section 4 *Project Plans*, page 20). Ensure environmental and effluent measurements are planned and performed following prescribed regulatory requirements, DOE Order guidance, or industry standards. Ensure appropriate implementing procedures are developed to prescribe sampling processes.

Control of Samples

MAQ Policy Environmental and effluent samples will be controlled to maintain legally defensible data and to prevent cross contamination or data loss. Requirements for the control and tracking of these samples will be specified in the project plan or implementing procedures.

Implementation The following table lists responsibilities.

Who	What
Project and team leaders	Ensure that procedures are developed to describe the following, as appropriate or necessary: • a sample numbering and labeling system that reliably and legibly identifies samples and items. • chain of custody requirements. • sample holding times. • sample volumes required for analyses. • storing and shipping requirements. • sample status tracking.

Analytical Chemistry

MAQ Policy

All analytical chemistry conducted on environmental or effluent samples will be procured from laboratories that endeavor to provide legally defensible, quality-assured data. MAQ will specify the quality requirements and data package deliverables that will enable the group to defend the data to any outside examination and completely document the circumstances under which it was created.

Implementation

The following table lists responsibilities.

Who	What
Project and team leaders	Ensure appropriate sample analyses are requested. Ensure project data quality objectives are satisfied by the data quality requirements in the contract.
QA Officer	Conduct or request periodic formal assessments (see Section 10 *Assessing Suppliers*, p. 58) of all analytical chemistry vendors to demonstrate their capability to do our work and their compliance with requirements.
Chemistry coordinator	Evaluate and select analytical laboratories to perform analytical work on environmental samples. Develop and provide complete, written statements of work to the contractor laboratory. Maintain up-to-date copies of all analytical procedures and quality plans from each vendor. Track samples dispatched for chemical analysis. Receive and evaluate the data packages for completeness. Ensure data quality requirements of the contract and data deliverables are met. Ensure analytical chemistry data transfer and upload to appropriate database(s).

Continued on next page.

Analytical Chemistry, continued

Who	What
Chemistry coordinator (continued)	Ensure the following requirements are passed on to the vendor in the contract and/or statement of work: • Use only EPA-approved procedures (e.g., 40 CFR Appendix B, Method 114 for radionuclides). • Do no subcontracting of samples. • Complete all analyses pursuant to existing QA Plan and software procedures compliant with EPA (QA/R-5) or DOE (O 414.1 or 10 CFR 830.120). • Perform analyses to meet the specifications in the statements of work. • Supply a data package that meets MAQ definition of defensibility. • Demonstrate timely delivery of data. • Document and maintain successful participation in national performance evaluation programs from EPA-EMSL-LV and DOE-EML. • Demonstrate ability to meet minimum detectable activity (MDA) requirements on each analyte. • Demonstrate staff qualifications of all personnel who will handle MAQ samples. • Possess appropriate DOE, NRC and/or State nuclear material licenses for each isotope. • Use calibration standards traceable to NIST; all isotopic tracer solutions should be traceable to NIST.

Data and Software Management

MAQ Policy

All data essential to meet the specifications of project deliverables will be managed to ensure validity and security. Valid data have been checked for accuracy and ensured to meet data quality objectives. Secure data are protected against loss. Methods of data verification, validation, and security will be described in the project plan or implementing procedures. Calculation methods will be documented. Database and application software developed by or for MAQ that performs calculations or other significant operations on data used in compliance determination or data used to analyze impacts on the public health or environment will be considered critical software. Critical database and application software will have documentation sufficient to understand the structure, function, and usage of the software.

Data will be released to the public when the data have been verified and validated and are approved by the responsible project leader.

Implementation

The following table lists responsibilities.

Who	What
Project and team leaders	Ensure that data generated for the project deliverables are valid and secure. Coordinate development of software needs with IM team leader. Document all calculation methods of critical work in a procedure or project plan. Document the method of data verification, validation, and security in the project plan or implementing procedures.
Information Management Team members	Identify and maintain a list of critical database and application software used in the group according to MAQ-037, "MAQ Software Management." Appoint critical database and application software owners. Assure information regarding computer security requirements are communicated on a regular basis to all members of MAQ. Develop and maintain a computer security procedure.

Continued on next page.

Data and Software Management, continued

Who	What
Information Management Team members, *continued*	Develop methods for preparation of documentation, user guides and manuals for critical software databases or applications. Provide technical support and data management expertise to users and owners of critical database and application software. Develop methods for: • identifying the latest revision or version of a critical software code. • notifying users of software that a new version is available. • ensuring critical software output is traceable to the software version used. • verifying and documenting that the software performs as intended. • backing up computer network server drives (see procedure MAQ-034).
Personal computer operators	Back up critical and other significant software and data as appropriate on an MAQ network drive or on removable media. Process information in accordance with classification levels. Adhere to information and computer security process in accordance with Laboratory and group specific requirements.

Calibration and Maintenance of Measuring and Test Equipment

MAQ Policy All MAQ technical work that depends upon the accuracy of data will be performed using equipment for which the calibration status and limits of accuracy are known and controlled.

Implementation The following table lists responsibilities.

Who	What
Project and team leaders	Use qualified persons and/or organizations to calibrate equipment used in project activities, as necessary. If project personnel calibrate equipment, develop appropriate procedures to control the calibration, maintenance, accountability, and use of measuring and test equipment. Implementing procedures must satisfy the minimum requirements given in the Laboratory Calibration Program (on ESA-MT home page; to be superseded by LIR 402-140-01) and in this section and will address: • Specified intervals for recalibration based on the item's required accuracy, intended use, and frequency of use, item stability characteristics, manufacturer's recommendations, or other conditions affecting performance. • Calibration against a traceable reference standard or physical constant that has accuracy commensurate with the desired tolerance. • Records keeping for in-house calibrations or for instruments verified before use. • Labeling of the equipment to indicate its calibration status and reference to calibration procedure. • Laboratory requirements for calibration given in the Laboratory Calibration Program.

Continued on next page.

Calibration and Maintenance of Measuring and Test Equipment, continued

Who	What
All employees	Observe calibration status labels or stickers. Do not use equipment that is past its calibration interval and notify the Laboratory Measurement Technology Group or responsible operator (e.g., HSR-4 RIC) for recalibration. Initiate a deficiency report whenever an uncalibrated instrument or equipment has been used to collect data.

Off-Normal Events

MAQ Policy

When significant off-normal events are detected, all members of the group will be notified as soon as practical.

Off-normal events include stack emission increases, elevated environmental measurements, chemical or radiological spills inside or outside of buildings.

Implementation

The following table lists responsibilities.

Who	What
Project and team leaders	Notify all group members via e-mail when an off-normal environmental measurement is detected.
Group Leader	Notify other Laboratory groups that may have interest in the off-normal event. Notify upper management.

Maintenance

MAQ Policy Equipment that is critical to meeting the quality specification of MAQ products will require a preventive maintenance program. This program will be addressed in the project plan or implementing procedures.

Implementation The following table lists responsibilities.

Who	What
Project and team leaders	Develop preventive maintenance requirements for project equipment as appropriate. Use qualified personnel and/or organizations to perform preventive maintenance. If project personnel perform preventive maintenance, develop appropriate implementing procedures, or include in existing procedures, maintenance activities and maintenance log requirements for critical or essential equipment.

Property Control

MAQ Policy Group controlled property and capital equipment will be managed according to the requirements of the LANL Materials Management Manual (Chapter 8 of the Laboratory Manual) or its successor.

Implementation The following table lists responsibilities.

Who	What
All employees	Notify the group property administrator when controlled equipment is moved or relocated to another room or building.
Group Program Administrator	Track, label, and record locations for all group controlled property and capital equipment by following the requirements specified in the laboratory property management manual, coordinating through the Division property administrator. Conform to Laboratory policies and guidelines on key/core requirements.
All group members	Assure appropriate levels of property protection such as classification requirements, fire protection, and property accountability Ensure assigned property and keys are appropriately controlled and protected.

Laboratory and Field Notebooks

MAQ Policy Work recorded in a notebook or logbook will document who did the work, where, and when. It will be described in sufficient clarity and detail that will allow another person with equivalent training and experience to understand or duplicate the work. Entries in notebooks and logbooks will adhere to the requirements in procedure MAQ-011.

Implementation The following table lists responsibilities.

Who	What
All employees	Maintain adequate documentation of work in sufficient detail to prove authorship, authenticity, and originality. Make notebook entries in compliance with the MAQ Policy given above. Submit copies of the notebook pages and submit the completed logbooks to the records coordinator.

Section 6

Design

Design

MAQ Policy Design activities will be conducted and reviewed in accordance with established and approved procedures, incorporating and implementing sound engineering/ scientific principles and appropriate standards.

Implementation The following table lists responsibilities.

Who	What
Project and team leaders	Ensure that applicable design requirements for the project are specified in the project plan to ensure the design process meets the requirements of the Laboratory Quality Management Plan. Develop and implement appropriate procedures. For most large design activities, involvement and review by the appropriate engineering group may be required.

Section 7

Procurement

Procurement

MAQ Policy Procurement of items used in MAQ will follow the Laboratory process for procurement.

Implementation The following table lists responsibilities.

Who	What
Group Office Administrator	Ensure procurements follow Laboratory prescribed requirements for procurement.
Project and team leaders	Select suppliers based on evaluation of ability to supply products or services which meet project requirements.

Section 8

Inspection and Acceptance Testing

Inspection and Acceptance Testing

MAQ Policy MAQ will perform appropriate inspections and tests on items critical to the quality of MAQ processes and products. Any required inspections and tests will be specified in project plans or implementing procedures.

Implementation The following table lists responsibilities.

Who	What
Project and team leaders	Ensure that project plans identify the items that require testing or inspection, the organization or team member to perform the inspection, methods and equipment to be used, and the level of documentation. Establish procedures providing for inspections that meet the requirements of the Laboratory Quality Assurance Management Plan. Ensure that standards and measuring and test equipment used to verify acceptability are calibrated and controlled according to Section 5 (*Calibration and Maintenance of Measuring and Test Equipment*, page 45).

Section 9

Management Assessment

Management Assessments

MAQ Policy Management assessments will be planned and implemented periodically to evaluate the integrated quality assurance program implementation. Problems identified during management assessments will be documented, reported to the group leader, and promptly corrected. Assessment results will be used to continuously improve the quality and efficiency of management and operations within the group.

Implementation The following table lists responsibilities.

Who	What
Group Leader	Plan and conduct periodic self-assessments (procedure MAQ-029) of the management of projects within the group to evaluate the effectiveness of the teams in achieving the group mission. Document results of management assessments in a report. Initiate a deficiency (see Section 3 *Deficiencies and Corrective Action*, page 18) for deviations from requirements found during the assessment. Oversee resolution and correction of all problems found during management assessments.
Project and team leaders	Participate in group and project management assessments conducted by the group leader. Follow up on recommendations or deficiencies identified in the assessments.

Management Walk-arounds

MAQ Policy

MAQ will comply with the requirements for regular walk-arounds as prescribed in Management Safety Walk-Arounds (LIR 307-01-03). RRES Division may impose additional requirements for the conduct and documentation of walk-arounds.

The group leader will conduct walk-arounds at least once per month and as needed for hazardous operations.. The group leader may request team leaders or project leaders to conduct walk-arounds of work areas under their responsibility. Work will be evaluated to requirements in the applicable project plan, implementing procedures, and applicable LIRs (or their guidance cards). All walk-arounds will be documented in the LANL walk-around system to include work observed, noteworthy practices, observations, and deficiencies. The group deficiency process (MAQ-026) will be used to document, track, and correct all deficiencies found during a walk-around.

Implementation

The following table lists responsibilities.

Who	What
Group Leader	Conduct regular walk-arounds at least once per month or more often for higher risk operations. Record the performance of walk-arounds in the laboratory database.

Section 10

Independent Assessment

Independent Assessments

MAQ Policy Independent assessments (audits) will be conducted throughout the group, as specified by the group leader, to verify compliance with external regulatory drivers, LANL requirements, and all aspects of this Quality Management Plan. To evaluate the effectiveness of the quality program, trained and technically knowledgeable personnel not having direct responsibility for the areas they are assessing will conduct assessments, in accordance with written plans or procedures.

Implementation The following table lists responsibilities.

Who	What
QA Officer	Schedule and coordinate independent assessments to meet external regulatory requirements, LANL requirements, or MAQ requirements, e.g.: • initial management effectiveness assessment • biannual assessments (technical or management) • "internal" assessments by LANL's Quality Management Group (or successor) • LANL-required audits and assessments • Other external assessments as specified by the group leader Ensure assessments are conducted by organizations independent of MAQ, according to written plans and scopes. Track findings for MAQ.
Group Leader	Approve assessment scope and schedules. Contract with assessors as appropriate.
Project and team leaders	Establish and document in the project plan any periodic or special assessments required by the project or by regulatory drivers. Ensure such assessments are conducted.

Continued on next page.

Independent Assessments, continued

Who	What
Assessors	Provide a written plan and/or procedure for the assessment scope and schedule. Monitor work performance. Identify abnormal performance and potential problem precursors. Identify improvement opportunities. Report results to the level of management that has the authority to effect change. Verify resolution of problems (optional, depending on scope of assessment). The assessor's focus for the assessment will be on improving the quality of the process that leads to the end product.

Assessing Suppliers

MAQ Policy

Assessments will be periodically conducted by MAQ to ensure that required information from the following organizations meets quality specifications:

- analytical laboratories supplying data.
- other Laboratory organizations (such as LANSCE) supplying information used in compliance or other reports.
- organizations supplying services (such as the LANL support services contractor).

If problems are found with a supplier's product or service, MAQ will work with that supplier until the problem is corrected or will obtain alternate suppliers.

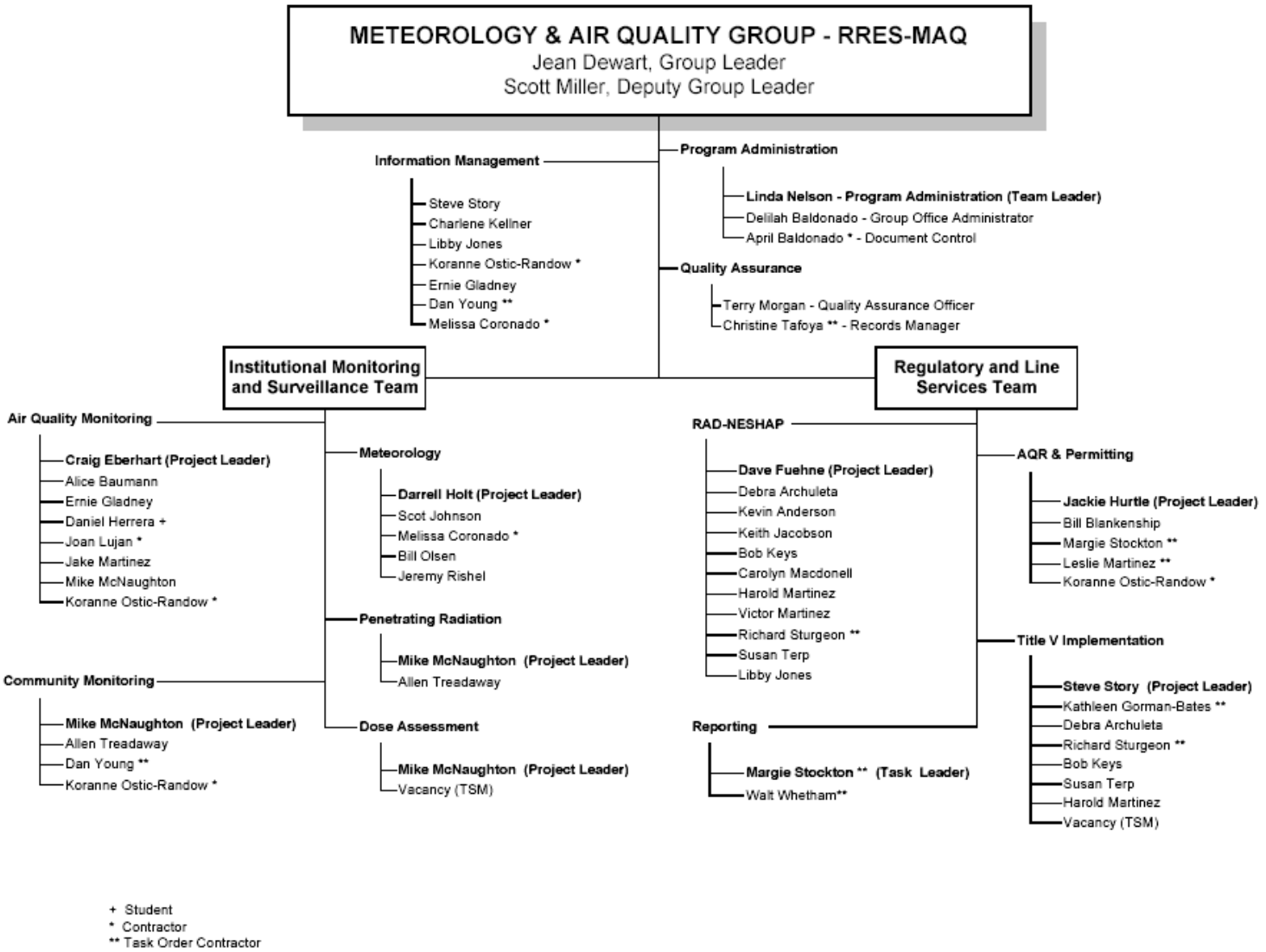
Implementation

The following table lists responsibilities.

Who	What
QA Officer	Schedule and coordinate periodic assessments (e.g., by contractors or by group personnel) of suppliers as needed to ensure information or work products meets quality specifications as given in LIRs, LPRs (Laboratory Performance Requirements), or other specifications documents such as work contracts.
Project and team leaders	Identify need for assessments of suppliers who provide services to project (e.g., LANL support services contractor who does work for Refrigeration program). Inform QA officer of need for assessments.
All employees	Participate in assessments, as requested by project leaders or the group leader, as subject matter experts or quality assessors.

Appendix A

MAQ Organization Chart



\+ Student
* Contractor
** Task Order Contractor

Last Modified: 02/27/2003

Appendix B

References

Requirements and guidance documents:

Title 40 Code of Federal Regulations Part 61, Subpart H, "National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities," December 15, 1989

Title 40 Code of Federal Regulations Part 58, "Ambient Air Quality Surveillance," Appendix E

DOE Memo "Procedure for the Release of Residual Radioactive Material from Real Property," DOE Albuquerque Operations Office, June 16, 2000

DOE Order 151.1, "Comprehensive Emergency Management System," changed November 1, 2000

DOE Order 231.1, "Environment, Safety, and Health Reporting," changed November 7, 1996

DOE Order 414.1A, "Quality Assurance," changed July 12, 2001 (supersedes DOE Order 5700.6C, "Quality Assurance")

DOE Order 450.1, "Environmental Protection Program," approved January 15, 2003

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DOE/EH-0173T, "Environmental Regulatory Guide for Radiological Effluent Monitoring and Environmental Surveillance," January 1991

LAUR-98-2837, Rev. 4, "Integrated Safety Management Description Document", September 2002

LPR380-00-00, "Quality," July 30, 1999 (supersedes PRD-110-01.1, "LANL Quality Assurance Management Plan")

LIR300-00-01, "Safe Work Practices," April 5, 2001

LIR300-00-02, "Documentation of Safe Work Practices," July 10, 2001

LIR 307-01-03, "Management Safety Walk-Arounds," March 9, 1998

LIR 401-10-01, "Stop Work and Restart," September 15, 2000

LIR404-00-01, "Waste Acceptance, Characterization, and Certification Program," revised July 1, 1998

LIR404-00-02, "General Waste Management Requirements," revised November 30, 2000

LIR404-00-05, "Managing Radioactive Waste," revised February 2, 2001

NOTICE No. 0044 Changes to Laboratory Calibration Program; see ESA-MT home page (to be superseded by LIR 402-140-01)

EPA QA/R-5, "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," Interim Final, January 1994

EPA QA/G-4, "Guidance for the Data Quality Objectives Process," final, September 1994

EPA QA/G-9, "Guidance for Data Quality Assessment," External Working Draft, March 27, 1995

EPA "Guidance on Implementing the Radionuclide NESHAPS," July 1991

FFCA, "Appendix A Compliance Plan" of the "Federal Facility Compliance Agreement," June 1996

Group MAQ Air Quality documents:

MAQ-AIRNET, "Sampling and Analysis Plan for the Radiological Air Sampling Network"

MAQ-ASBESTOS, "Quality Assurance Project Plan for the Asbestos Report Project"

MAQ-BE, "Quality Assurance Project Plan for the Beryllium NESHAP Compliance Project" (in preparation)

MAQ-BM, "Quality Assurance Project Plan for Beryllium Stack Monitoring at TA-3-141"

MAQ-MET, "Quality Assurance Project Plan for the Meteorology Monitoring Project"

MAQ-NEWNET, "Quality Assurance Project Plan for the Neighborhood Environmental Watch Network (NEWNET)"

MAQ-NonRadNET, "Quality Assurance Project Plan for the Non-Radiological Air Sampling Network"

MAQ-OP, "Quality Assurance Project Plan for the Operating Permit Project"

MAQ-RN, "Quality Assurance Project Plan for the Rad-NESHAP Compliance Project"

MAQ-DPRNET, "Quality Assurance Project Plan for the Direct Penetrating Radiation Monitoring Project"

MAQ-RRP, "Quality Assurance Project Plan for the Regulatory Review and Permitting Project", in preparation

MAQ-022, "Preparation, Review and Approval of Procedures"

MAQ-024, "Personnel Training"

MAQ-025, "Records Management"

MAQ-026, "Deficiency Reporting and Correcting"

MAQ-029, "Management Assessments"

MAQ-030, “Document Distribution”

MAQ-032, “Orienting New Employees”

MAQ-034, “Network Server Backup Tape Rotation, Storage, and Archiving”

MAQ-035, “Work Safety Review and Authorization”

MAQ-037, “MAQ Software Management”